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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/624,831	07/25/2000	Steven E. Baker	98-0487.12	7340

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EXAMINER

FOWLKES, ANDRE R

ART UNIT	PAPER NUMBER
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2122

3

DATE MAILED: 11/21/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/624,831

Applicant(s)

BAKER, STEVEN E.

Examiner

Andre R. Fowlkes

Art Unit

2122

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 7/23/00.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07/25/00 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

1. Claims 1-12 are pending.

Drawings

2. New corrected drawings are required in this application because it is noted that the drawings are informal. Applicant is advised to employ the services of a competent patent draftsman outside the Office, as the U.S. Patent and Trademark Office no longer prepares new drawings. The corrected drawings are required in reply to the Office action to avoid abandonment of the application. The requirement for corrected drawings will not be held in abeyance.

Specification

3. The disclosure is objected to because of the following informalities:
 - "the an engineer" should be "an engineer" on p. 9, line 2;
 - "are remaining each of the" should be "are remaining on each of the" on p. 9, line 30;

Appropriate correction is required.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 6 - 7 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 6 recites the limitation "master token list" in line 2. There is insufficient antecedent basis for this limitation in the claim.

Claim 7 depends on claim 6 and suffers the same deficiency as claim 6. Therefore, claim 7 is also rejected under 35 U.S.C. 112, second paragraph, as being dependant on a rejected claim.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

Claims 5 and 6 are rejected under 35 U.S.C. 102(e) as being anticipated by Amberg et al. (Amberg) U.S. Patent No. 5,991,543.

As per claim 5, Amberg discloses:

- **a simulation computer** (fig. 1 shows the target computer, 160, where the tests, 170, are executed).

- **a first process for creating a second process that downloads and installs customer ordered software onto a target computer** (col. 3 line 51 – col. 4 line 17, “To sequence the software installation ... steps, ... (a) sequencing program ... reads a plurality of component descriptors ... Component descriptors are computer readable descriptions of the components of (the) target system ... Having sequenced the steps required for target system 160, sequencing program 204 writes a series of ... files ... the output files include text files containing command lines (batch files) appropriate for executing the appropriate software installation ... steps upon target system”).

- **a third process for recursively simulating and interpreting the outcome of the execution of the second process** (Figure 10 shows an example of a recursive routine. The routine Runstep.exe is called as a subroutine by the Runstep.bat routine that Runstep.exe previously called).

- **one or more output files that contain information relating to the simulation and interpretation of the second process** (col. 14 lines 22-26, “results from the installation and testing may be logged ... the results preferably include whether all the steps were completed successfully and what types of failures ... were encountered”).

As per claim 6, the rejection of claim 5 is incorporated and further Amberg discloses that the **first process reads a electronic traveler to determine the model of the target computer , looks up in the master token list the model of the target computer and creates from the information in the master token list a second process that is an executable main batch file that downloads and installs customer ordered computer software onto the target computer** (col. 3 line 51 – col. 4 line 17, "To sequence the software installation ... steps, ... (a) sequencing program (first process) ... reads a plurality of component descriptors (electronic traveler) ... Component descriptors are computer readable descriptions of the components of (the) target system ... Having read the ... component descriptors, sequencing program **204** retrieves ... software installation ... steps corresponding to the component descriptors from the database (master token list) ... Having sequenced the steps required for target system 160, sequencing program 204 writes a series of ... files ... the output files include text files containing command lines (executable batch files) appropriate for executing the appropriate software installation ... steps upon target (computer) system").

6. Claims 8 – 12 are rejected under 35 U.S.C. 102(b) as being anticipated by Rickel et al. (Rickel) U.S. Patent No. 5,854,924.

As per claim 8, Rickel discloses :

- **A method of testing a recursive batch file** (col. 1 lines 6 - 7, "a static debugging tool is described which is arranged to debug (any type of) file").

- **analyzing the execution of the batch file** (col. 2 lines 19 – 20, “The analyzer detects the errors... in the ... file”)

- **analyzing the execution of sub-batch files called by the batch file** (col. 2 lines 19 – 22, “The analyzer detects errors ... by following all of the possible flow paths of the ... file”).

- **reporting the results of the analysis** (col. 59 – 60, “The static debugging tool causes the computer to output an error list”).

As per claim 9, the rejection of claim 8 is incorporated and further Rickel discloses that **the batch file contains labels, commands and comments** (col. 4 lines 62-63, “file 16 includes information (labels) identifying the function flow paths”, figure 8 shows instructions (commands), and col. 2 line 17, there are “calls within the ... file”, and calls are used to call any type of file or function), **and the analysis comprises the steps of reading the batch file, creating a list of labels, opening the batch file and verifying the integrity of each label in the list in conjunction with the batch file** (figure 8 shows the testing method reading the file and verifying the integrity of each instruction. col. 2 lines 15-23, “The static debugging tool also includes an arrangement for identifying (creating a list) the calls within the ... file”).

As per claim 10, the rejection of claim 9 is incorporated and further Rickel discloses **analyzing the execution of the batch file further comprises reading each line in the batch file and applying rules to each line** (figure 8 shows the testing method reading each line and applying rules to each line).

As per claim 11, the rejection of claim 8 is incorporated and further Rickel discloses that **analyzing the execution of each of the sub-batch files called by the batch file comprises the steps of reading the sub-batch file, creating a list of labels, opening the batch file and verifying the integrity of each label in the list in conjunction with the batch file** (figure 8 shows the testing method reading the file and verifying the integrity of each instruction. col. 2 lines 15-23, "The static debugging tool also includes an arrangement for identifying (creating a list) the calls within the ... file").

As per claim 12, the rejection of claim 8 is incorporated and further Rickel discloses **analyzing the execution of the batch file further comprises reading each line in the sub-batch files and applying rules to each line** (figure 8 shows the testing method reading each line and applying rules to each line).

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1 – 4 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Amberg et al (Amberg), U.S Patent No. 5,991,543 in view of Rickel et al. (Rickel), U.S. Patent No. 5,854,924.

As per claim 1, Amberg discloses:

- **a method of testing a process that downloads and installs customer ordered software onto a target computer** (abstract lines 1-2, "A method for installing and/or testing software for build to order computer systems").

- **dynamically generating a file that contains instructions that when executed downloads and installs customer ordered software to a target computer** (col. 3 line 66 – col. 4 line 17, "Step maker 140 is a computer system configured to sequence the software installation ... steps to be run on target system 160. To sequence the software installation ... steps, step maker 140, and more particularly, sequencing program 204 residing on step maker 140, first reads a plurality of component descriptors from descriptor file 96... sequencing program 204 retrieves a plurality of software installation ... steps corresponding to the component descriptors ... over (the) network connection 110... Having retrieved the software installation ... steps appropriate for target system 160, sequencing program 204 sequences the steps ... the output files include text files containing command lines appropriate for executing the appropriate software installation ... steps upon target system").

- **that the outcome of the execution of said file is determined** (col. 4 line 65-67, "Following the execution of the software installation and/or testing steps, results (the outcome) of the installation and tests are logged).

- **analyzing the outcome of the execution of said file to determine possible syntax errors and possible flow errors** (col. 14 lines 22-26, "results from the installation and testing may be logged ... the results preferably include whether all the steps were completed successfully and what types of failures ... were encountered").

-reporting said syntax errors and flow errors in a readable format (col. 14 lines 22-26, "results from the installation and testing may be logged ... the results preferably include whether all the steps were completed successfully and what types of failures ... were encountered").

Amberg does not explicitly disclose **interpreting said dynamically generated file in accordance with a set of evaluation rules.**

However, Rickel, in an analogous environment, discloses **interpreting said dynamically generated file in accordance with a set of evaluation rules.** (col. 1 line 55 – col. 2 line 9, "The static debugging tool includes an analyzer for causing the computer to statically analyze a representation of a ... file to detect the presence of program errors... without executing the ... file ... the debugging tool may include a system call and restrictions library (rules file) for providing information to the static debugging tool which is specific to particular system that the ... file is designed to be used")

Therefore, it would have been obvious to a person of ordinary skill in that art at the time the invention was made to incorporate the teachings of Rickel into the teachings of Amberg to interpret the dynamically generated file in accordance with a set of evaluation rules. The modification would have been obvious because one of ordinary skill in the art would be motivated to use rules to learn the results of the execution of a file, safely and inexpensively on a simulation computer, without taking the risk of actually executing the file.

As per claim 2, the rejection of claim 1 is incorporated and further Amberg discloses that **said dynamically generated file is a main batch file created from a static text file that indicates the model types of the computer a lookup file that indicates the necessary instruction required to be executed for the model type indicated, and a process that reads the model type from said static text file and creates said dynamically generated file by reading said lookup file to determine command components** (col. 3 line 51 – col. 4 line 17, “To sequence the software installation ... steps, ... (a) sequencing program ... reads a plurality of component descriptors ... Component descriptors are computer readable descriptions of the components of (the) target system ... Having sequenced the steps required for target system 160, sequencing program 204 writes a series of ... files ... the output files include text files containing command lines (batch files) appropriate for executing the appropriate software installation ... steps upon target system”).

As per claim 3, the rejection of claim 2 is incorporated and further Amberg discloses that the **main batch file contains one or more labels identifying the flow of the process** (abstract line 10, “creating a file including a start of execution indication (flow label)”), **and one or more commands containing instructions to be executed and one or more calls to one or more static batch files** (col. 12 lines 57-58, “Batch file (an ASCII text file containing a sequence of commands) 870 is then run”).

As per claim 4, the rejection of claim 3 is incorporated and further Amberg discloses that the **process of interpreting said dynamically generated batch file recursively simulates each of said one or more batch files to determine the**

outcome of the process (A recursive routine is one that can call itself directly or be called by another subroutine, one that it itself has called, and figure 10 shows this behavior. Figure 10 shows the routine Runstep.exe (note that .bat and .exe files are both executable files) being called as a subroutine by the Runstep.bat routine that Runstep.exe called itself).

As per claim 7, the rejection of claim 6 is incorporated and further Amberg discloses that **said batch file contains labels, commands, and sub batch file calls** (abstract line 10, "creating a file including a start of execution indication (flow label)", and col. 12 lines 57-58, "Batch file (an ASCII text file containing a sequence of commands) 870 is then run").

Amberg doesn't explicitly disclose that **said third process interpretively tracks said labels, simulates each of said commands and recursively evaluates each of said sub batch files until the end of the main batch file is reached by said third process.**

However, Rickel, in an analogous environment, discloses:

- that a **process interpretively tracks said labels** (abstract lines 9 – 11, "the analyzer detects the errors... by following all of the possible flow paths", and the flow paths are labeled, col. 4 lines 62-63, "file 16 includes information (labels) identifying the function flow paths").

- **simulates each of said commands** (col. 2 lines 30 – 32, "the static debugging tool symbolically executes ... (the) file").

- and recursively evaluated each of said sub batch files until the end of the main batch file is reached (col. 2 lines 16 - 21, "the (sub batch file) calls within the ... file (are represented symbolically) ... the analyzer detects the errors ... (in the) file by following all of the possible flow paths (recursive as well as iterative) of the ... file").

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the teachings of Rickel into the teachings of Amberg to have a system wherein the main batch file contains labels, commands, and sub batch file calls, and a third process that interpretively tracks the labels, simulates each of the commands and recursively evaluates each of the sub batch files. The modification would have been obvious because one of ordinary skill in the art would be motivated to have robust method of detecting errors in software capable of using the labels in the software to produce detailed error reports.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Schooler, U.S. Patent No. 6308321 discloses using labels to track the flow of process.

- Raduchel et al., U.S. Patent No. 6,418,444 B1 discloses label checking.

- Leino et al., U.S. Patent No. 2002/0046393 A1 discloses a method of verifying program correctness.

- Vrhel et al., U.S. Patent No. 6,543,047 B1 discloses a method for testing software and hardware integration.

- Gorshkov et al. , U.S. Patent No. 6,490,721 B1 discloses dynamically creating a testing file.

- Holzmann, U.S. Patent No. 2001/0037492 A1 discloses a method for automatically extracting verification models.

- Fairbanks, U.S. Patent No. 2003/0182645 A1 discloses a method for verifying a design.

- Gordon et al., U.S. Patent No. 2003/0154468 A1 discloses a verifier.

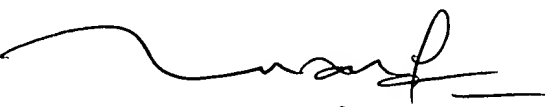
- Merks et al., U.S. Patent No. 6,516,460 B1 discloses debugging multiple processes with one instance of a debugger.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andre R. Fowlkes whose telephone number is (703)305-8889. The examiner can normally be reached on 8:00am-4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tuan Q. Dam can be reached on (703)305-4552. The fax phone number for the organization where this application or proceeding is assigned is (703)872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)305-3900.

ARF



TUAN DAM
SUPERVISORY PATENT EXAMINER